

FIG. 1

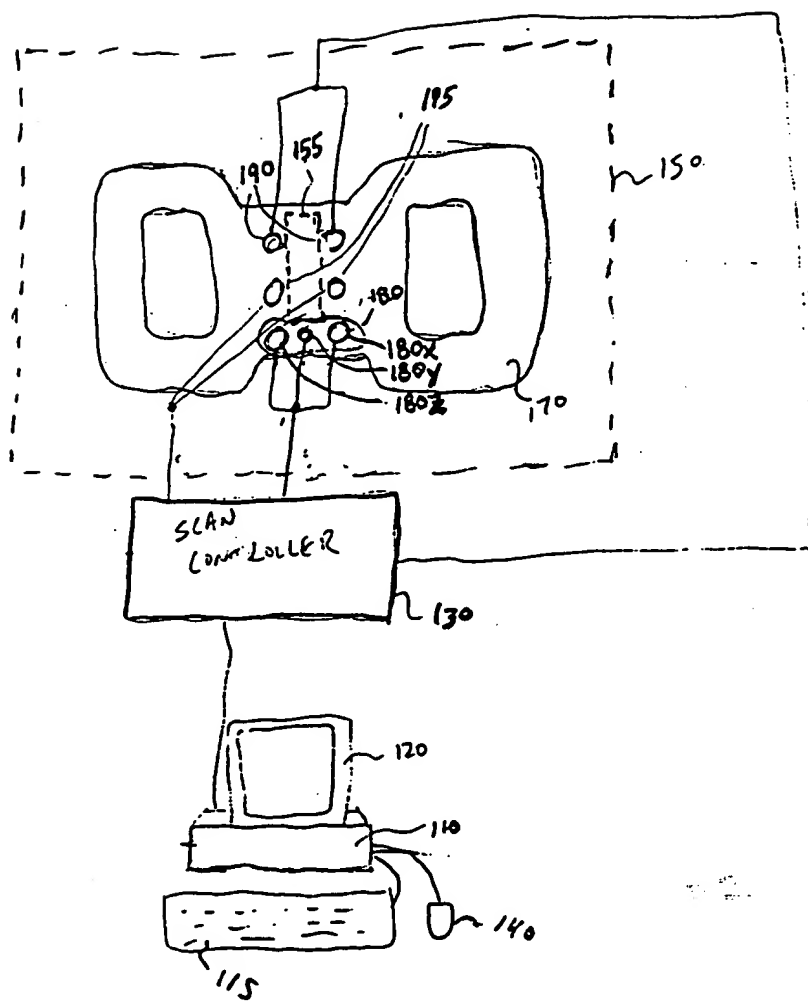
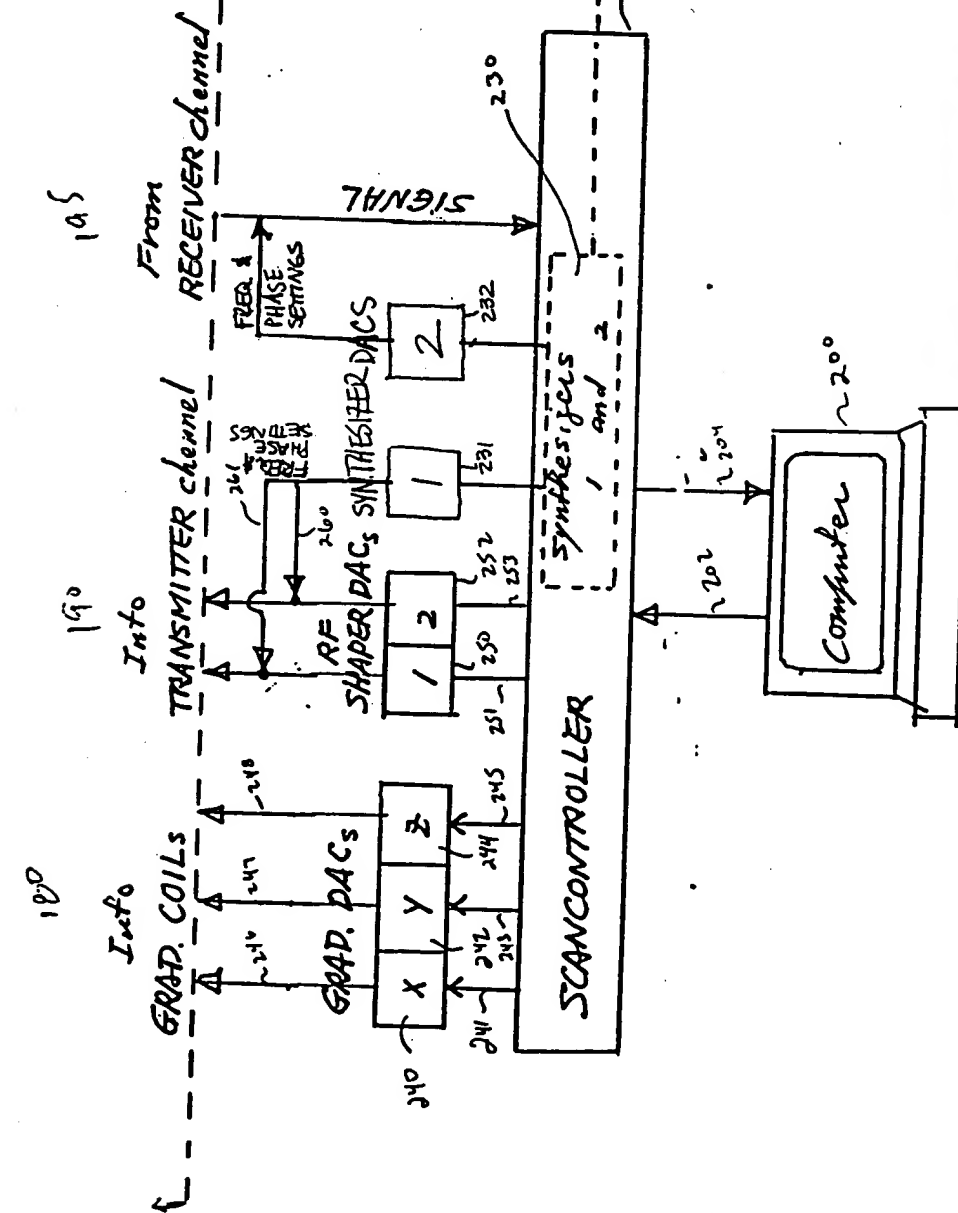


FIG. 1



Boundaries as indicated by [215] in Fig. 1

FIG. 2



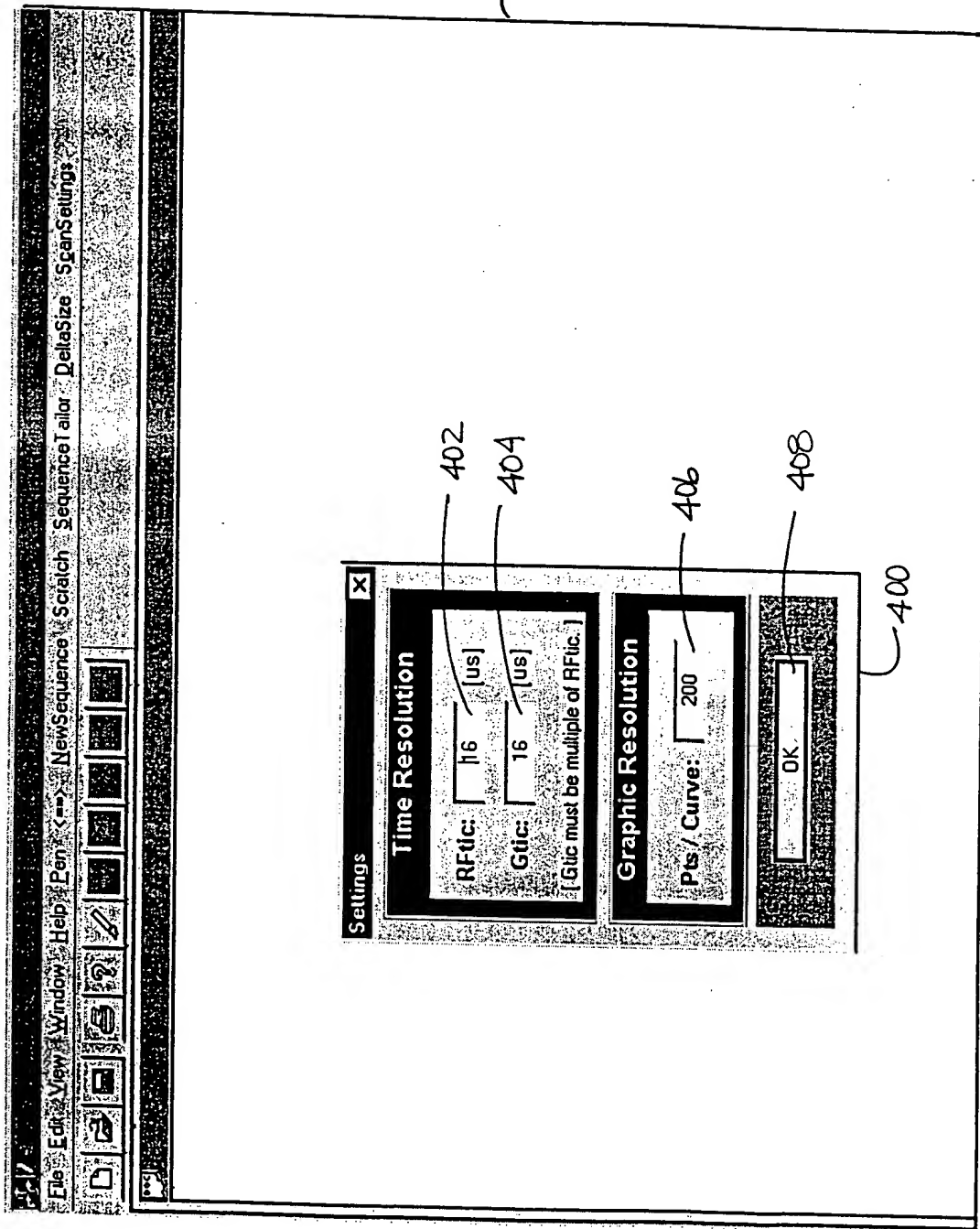


FIG. 4

File Edit View Window Help Pen NewSequence SequenceEditor DataSize ScanSettings

Sequence SE

I. Sequence Name: zse85ccip 502

II. TE: 85 504  
[ms]

III. Order for Gradient Motion Compensation: 506

SS: 2 RO: 1 PE: 1

IV. RF: 508

Duration[ms] Phase Shape Type

90 5 0 Gasico

180 5 90 Gasico

V. Data Acquisition: 510

Duration[ms] #Samples Echo Position

20 1024 0.5

OK Demo 1 Demo 3 Cancel

Ready

FIG. 5

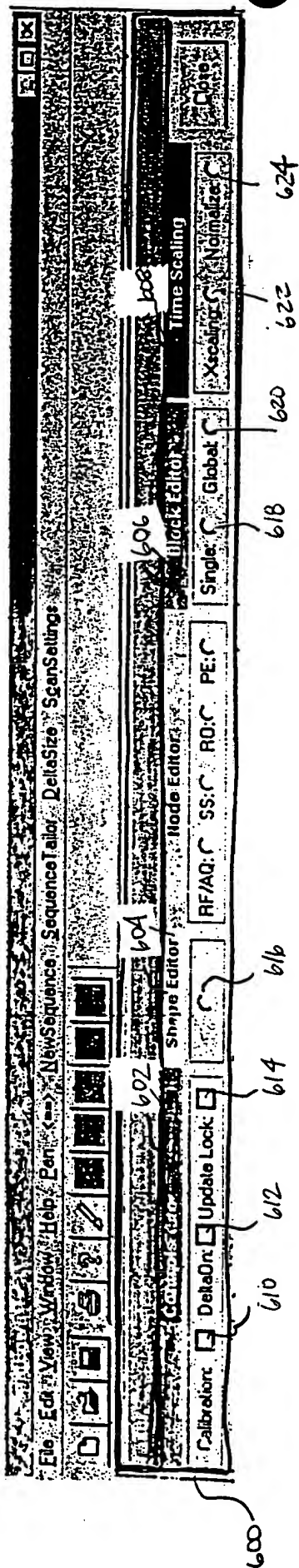


FIG. 6

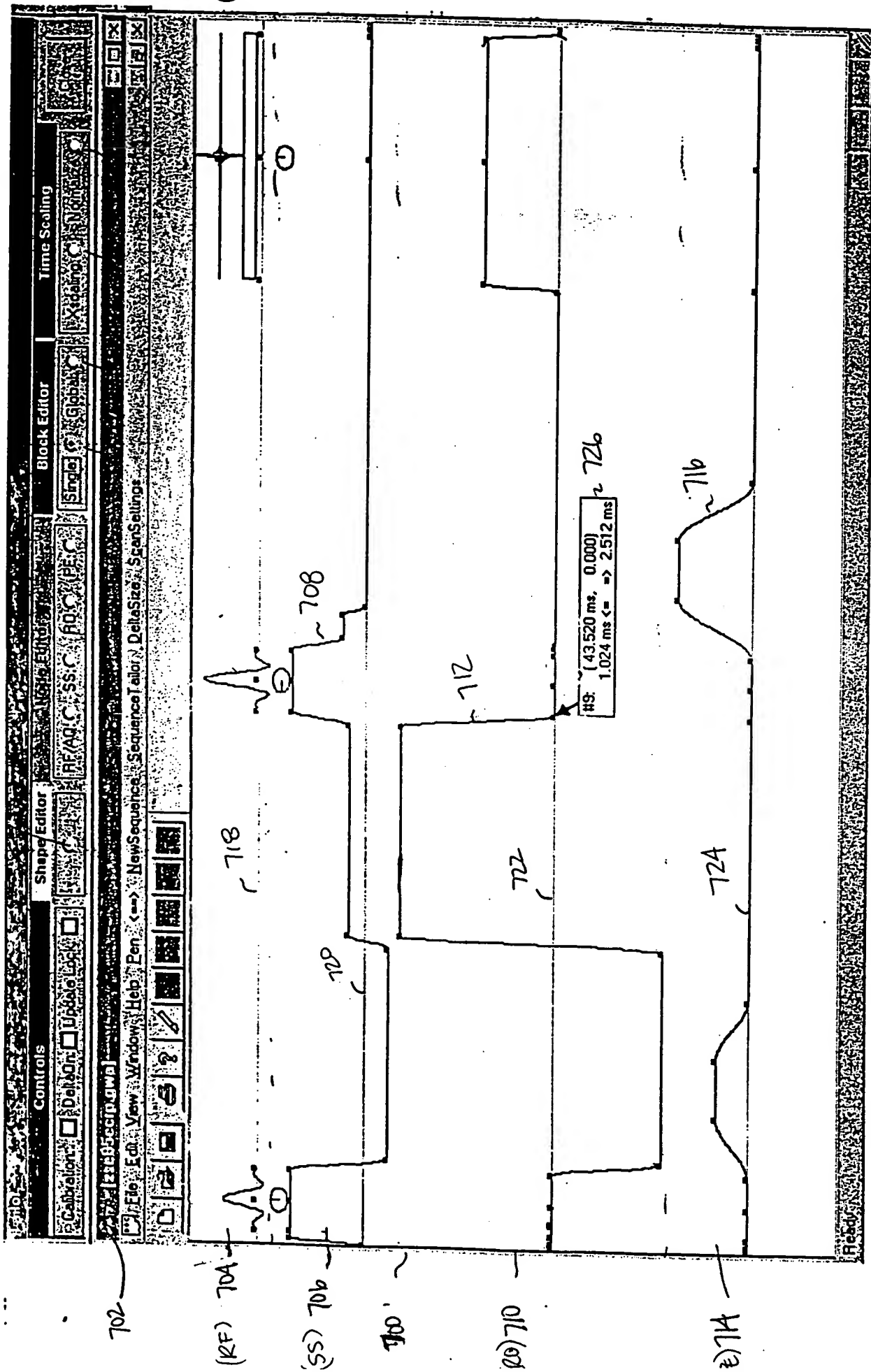
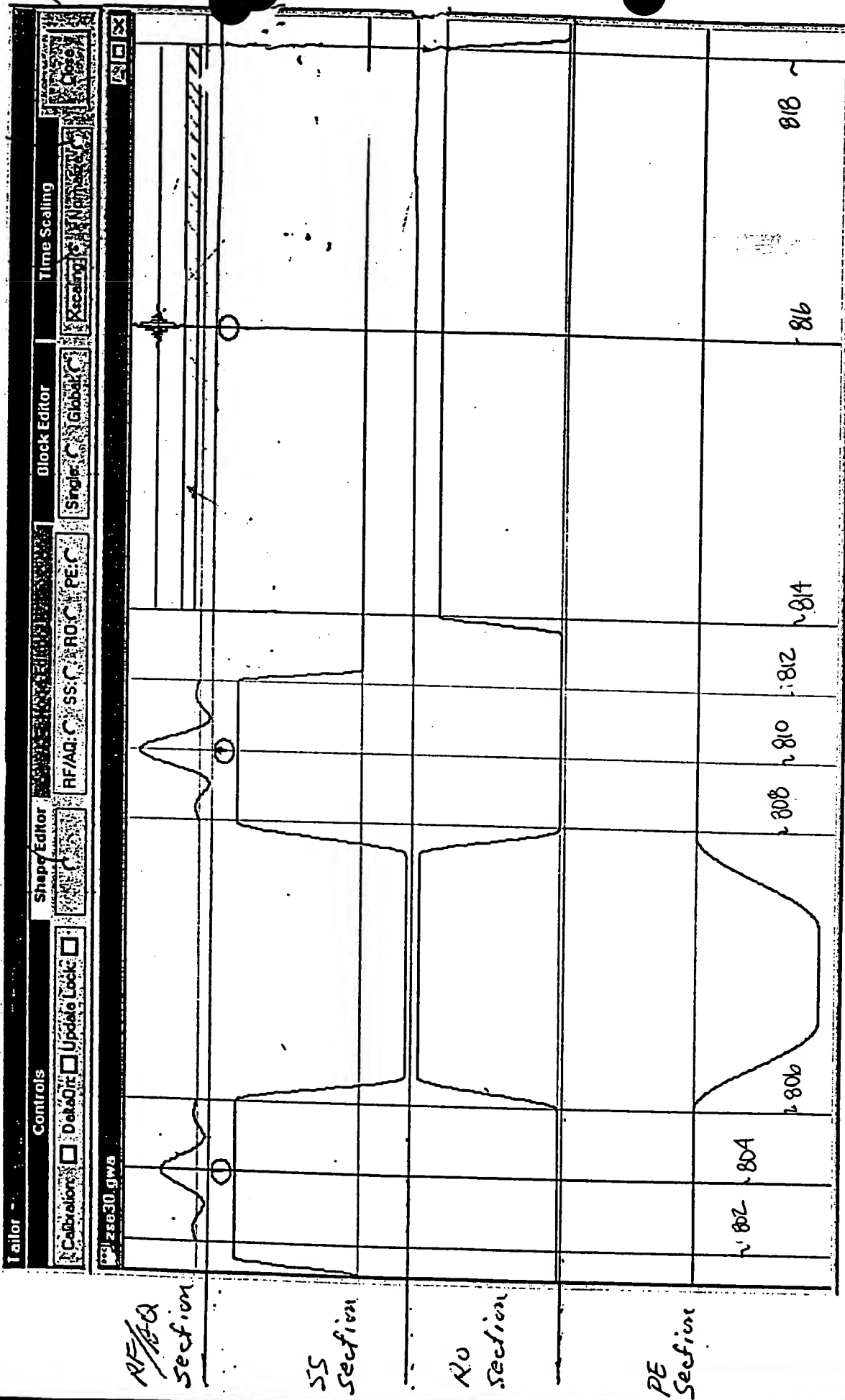


FIG. 7



Fi. 2

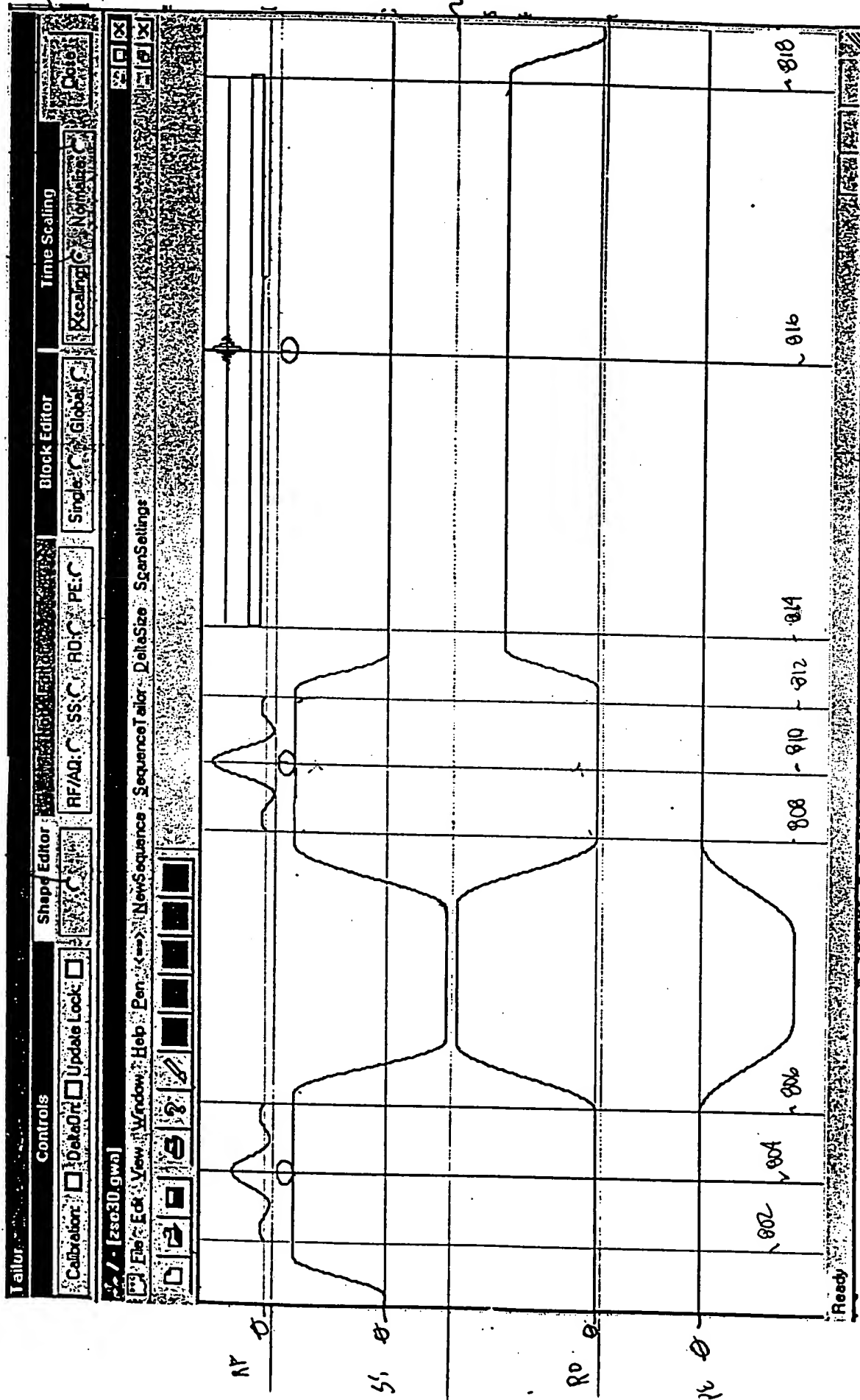


Fig. 3b

RF/AD: C SS: C RF: C PE: C

Tailor: ☐ Calibration: ☐ Delete On: ☐ Update Lock: ☐

Shape Editor: ☐ RF/AD: C SS: C RF: C PE: C

Block Editor: ☐ Single: C Global: C

Time Scaling: ☐ Recalling: C

Close

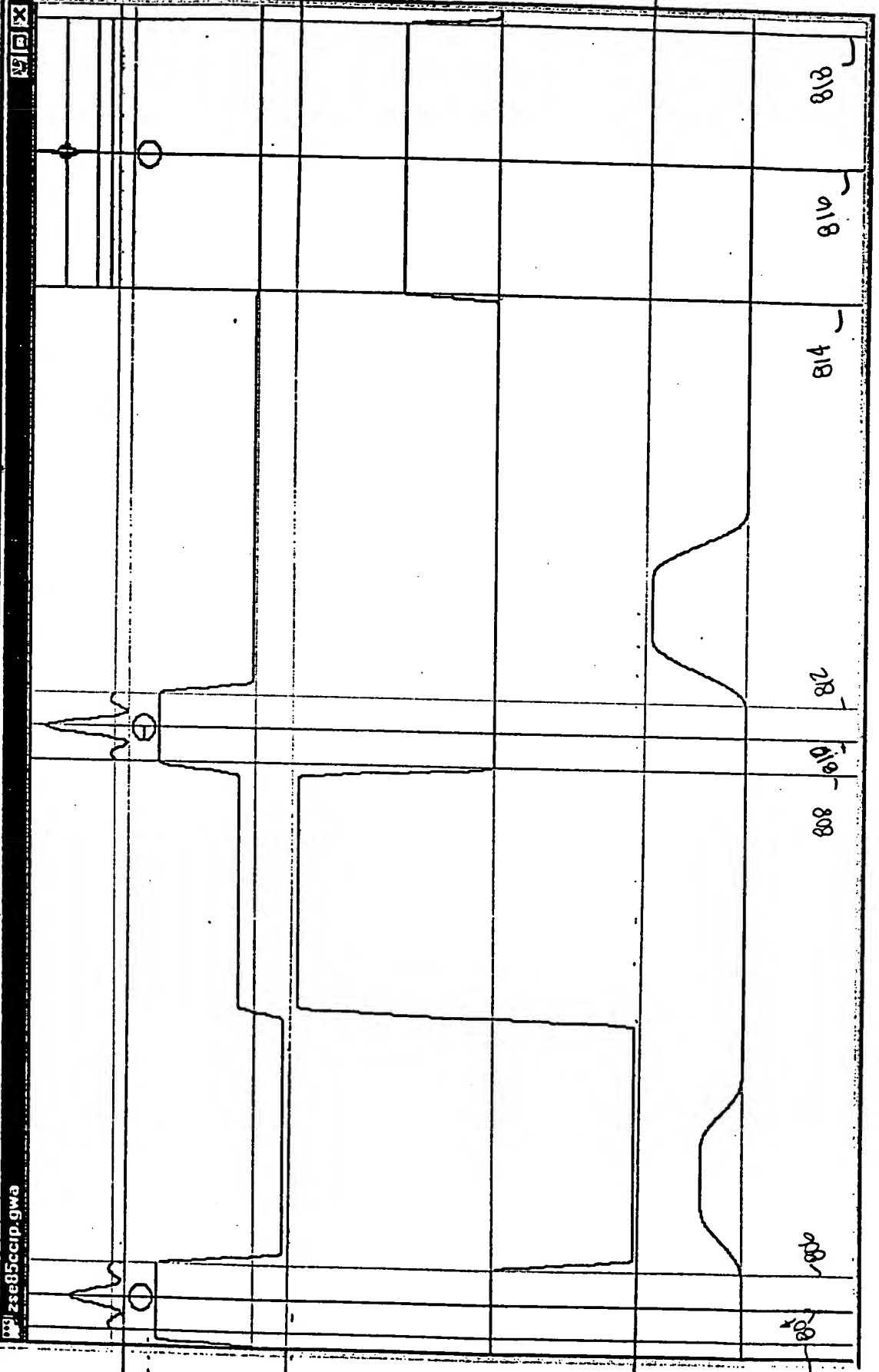


Fig-8c

FIG. 9A

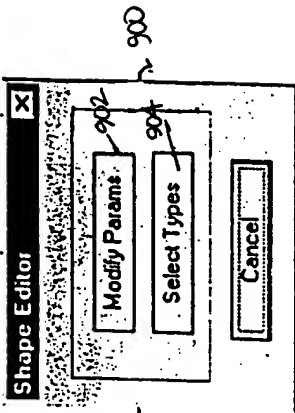


Fig. 9A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**Shape Modification:**

**Gasico Parameters:**

1. Amplitude of Sinc:	98	912
2. Cycles of Sinc:	3	914
3. Exponential of Sinc:	0.4	916
4. Amplitude of Cosine:	2	918
5. Cycles of Cosine:	0	920
6. Exponential of Cosine:	0.55	922

Asymmetric factor: 0.5 924

Cancel OK

Fig. 9B

FIG. 9C

952

Shape Selection:

Shape Types:

Hermite

OK

Cancel

950

Numerical Shapes:

Shapes Available

956

Fig. 9C

1000

zge12cr.gwa

File Edit View Window Help Pen



zge12cr.gwa

NewSequence Scratch Sequence Tailor DeltaSize

ScanSettings

MRI Scans

2D Scan - 1022

2D Variable TR Scan - 1022

3D Scan - 1026

FSE 2D Scan - 1028

FSE 3D Scan - 1030

Multiple 2D Scans - 1032

Multiple 3D Scans - 1034

Combo Scan

Static Combo

Dynamic Combo

Rescale

Tailor

Controls

Calibrate

DeltaOn

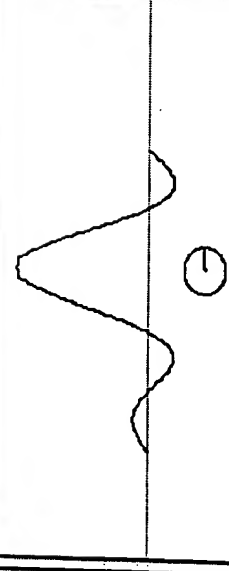
Shape

Scan a Gradient Wave

Scan a Shape

1006

1002



Setting Combo Imaging Parameters

Combo Seq Name: zge12cr-zse30

Number of Slices: 1

Slice Thickness: 7

Number of Levels: 256

PE DFT Size: 256

1 <= # Levels / Cycle -> 256

Present Seq: zge12cr

TE [ms]: 12

TR [ms]: 24.192

180 RF Flip: -84215

Associated Seq: zse30

TE [ms]: 30

TR [ms]: 44

180 RF Flip: 0

1024 = Samples = 1024

256 = Offset = 256

1.6801 = RO\_mult = 1.0016

Cancel OK

1054

1060

1050A

FIG. 10A

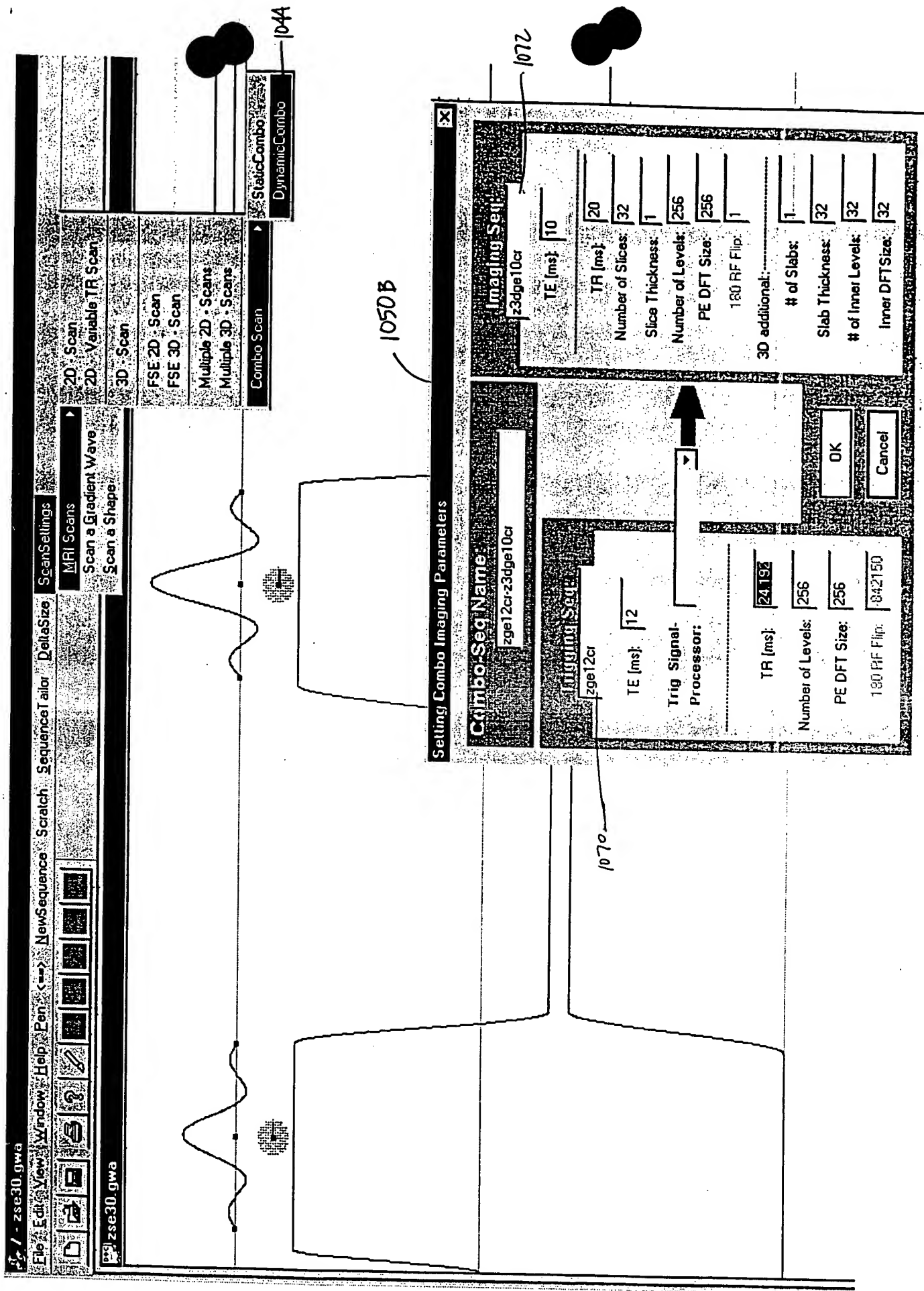


FIG. 10B

**Setting Imaging Parameters**

Sequence Name:  1082

TE (ms):  1084

Imaging Parameters:

Number of Slices:  1086

Slice Thickness:  1088

TR (ms):  1090

Number of Levels:  1092

DFT Size:  1094

180 RF Flip:  1096

OK Cancel

FIG. 10C

SCANNED, # 8

1000

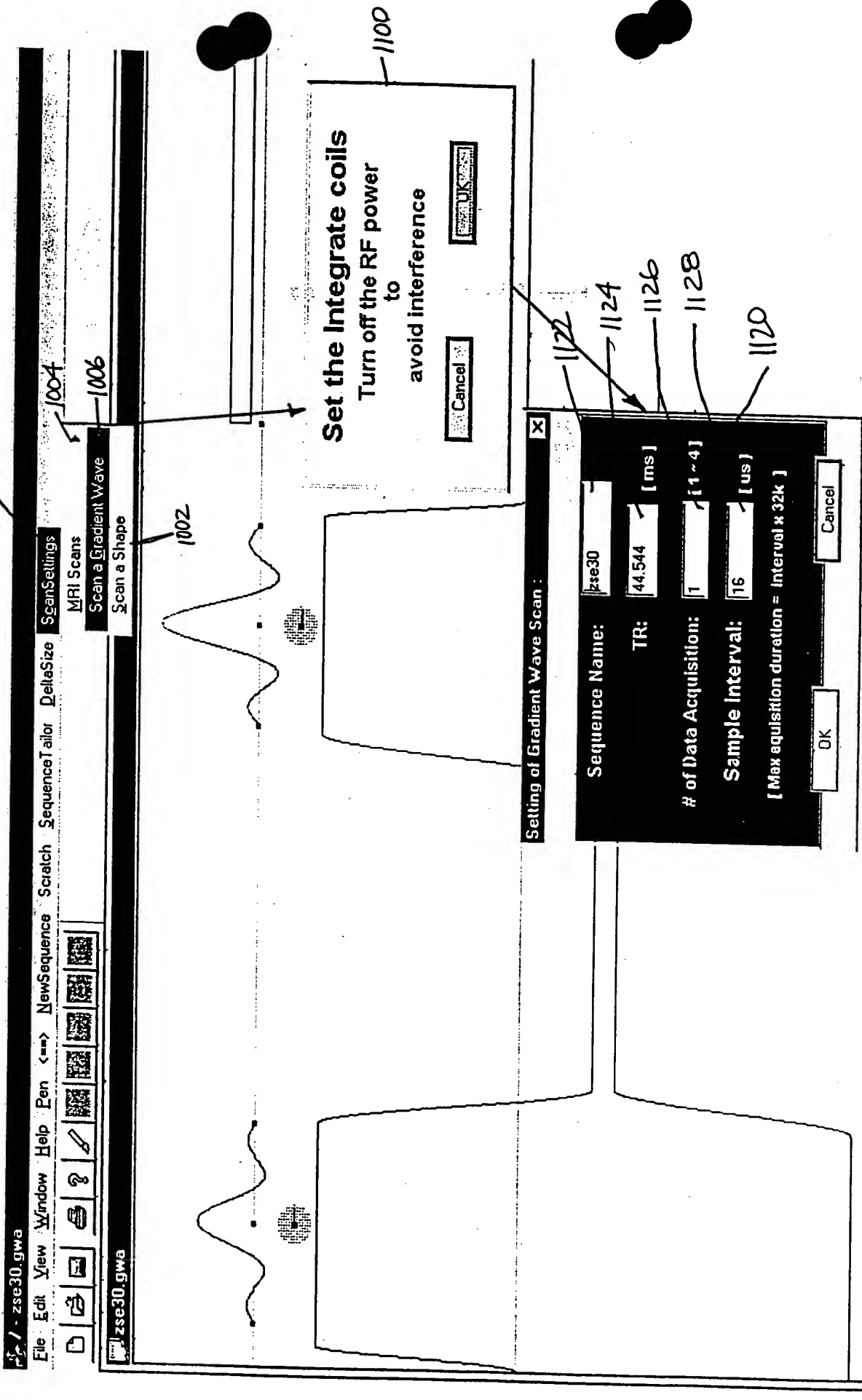


FIG. 11

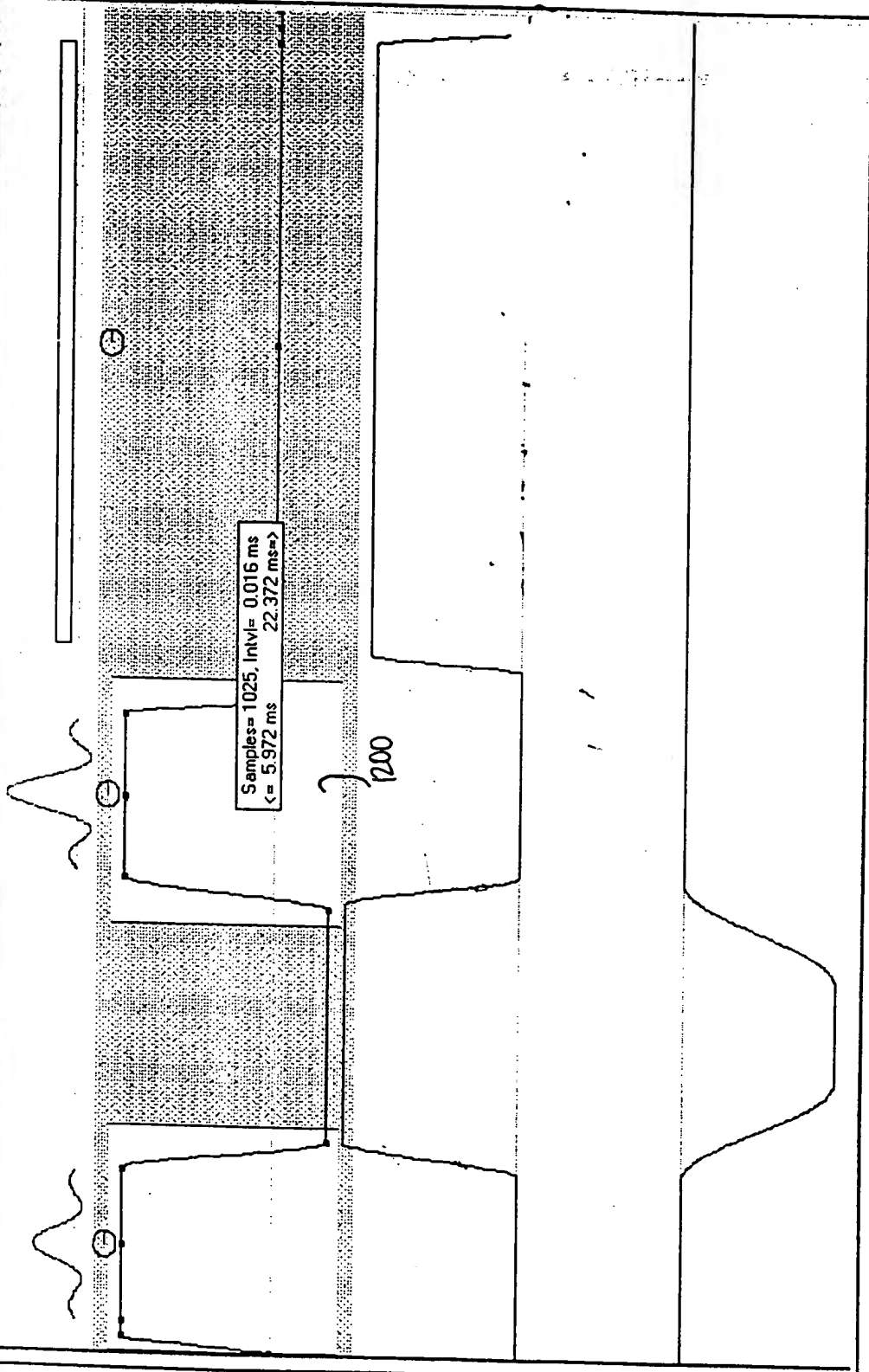
File Edit View Window Help Pen <=> NewSequence Scratch SequenceTailor DeltaSize ScanSettings

zsc30.gwa

File Edit View Window Help Pen <=> NewSequence Scratch SequenceTailor DeltaSize ScanSettings



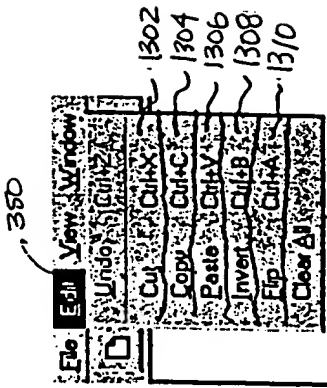
zsc30.gwa



SS  
GRADIENT

FIG. 12

FIG. 13A



1312

FIG. 13A

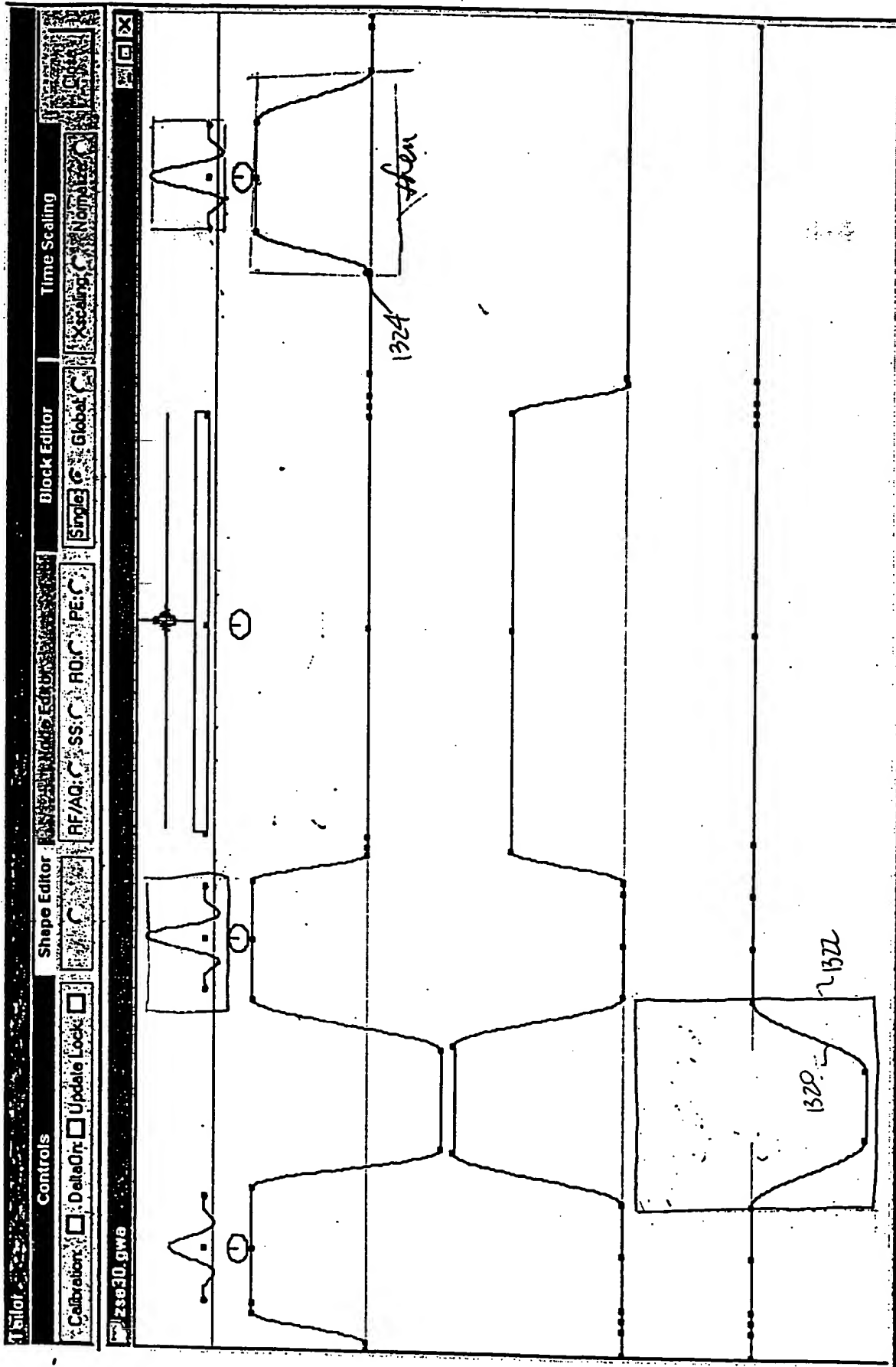


FIG. 13B

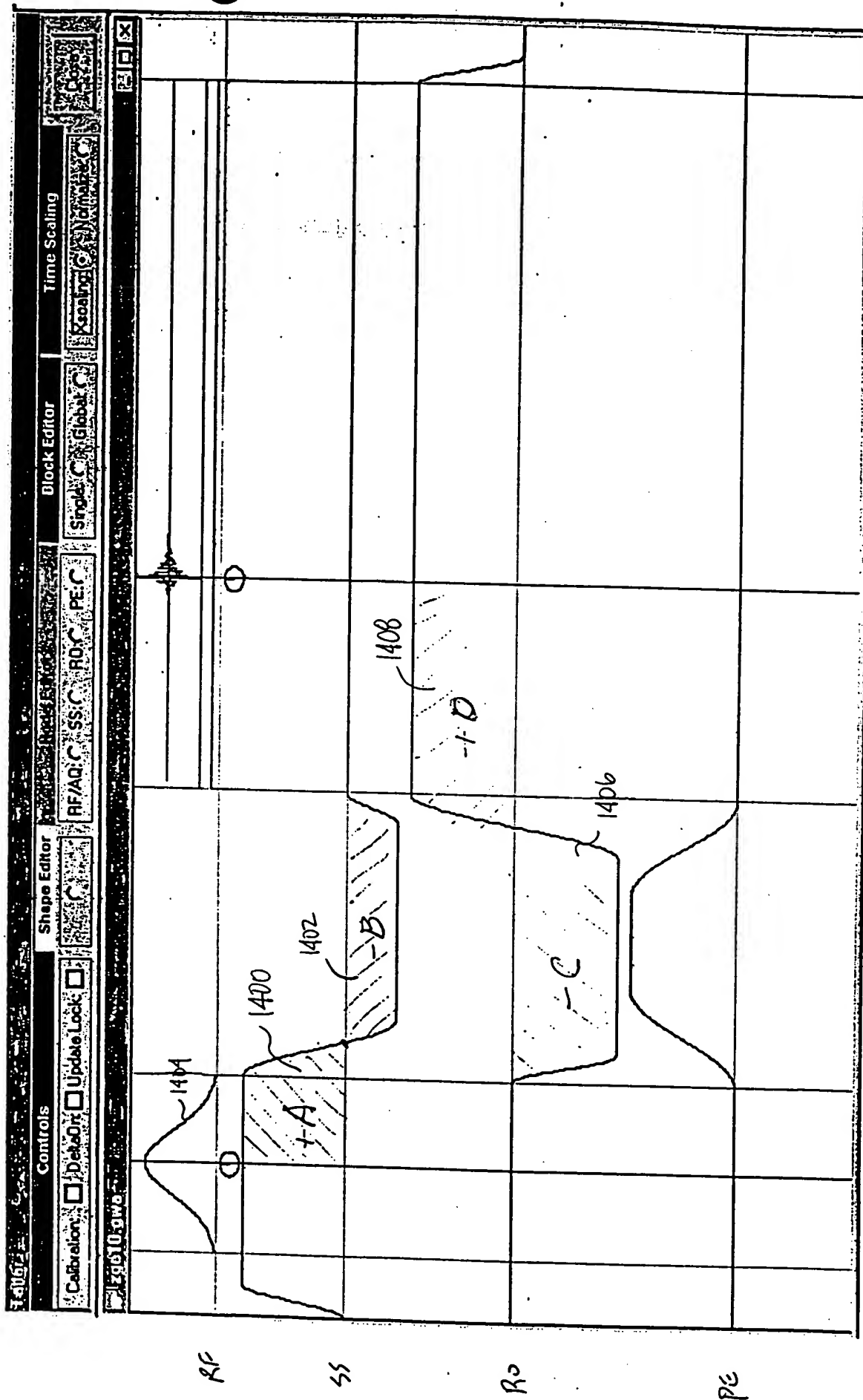


FIG. 14A

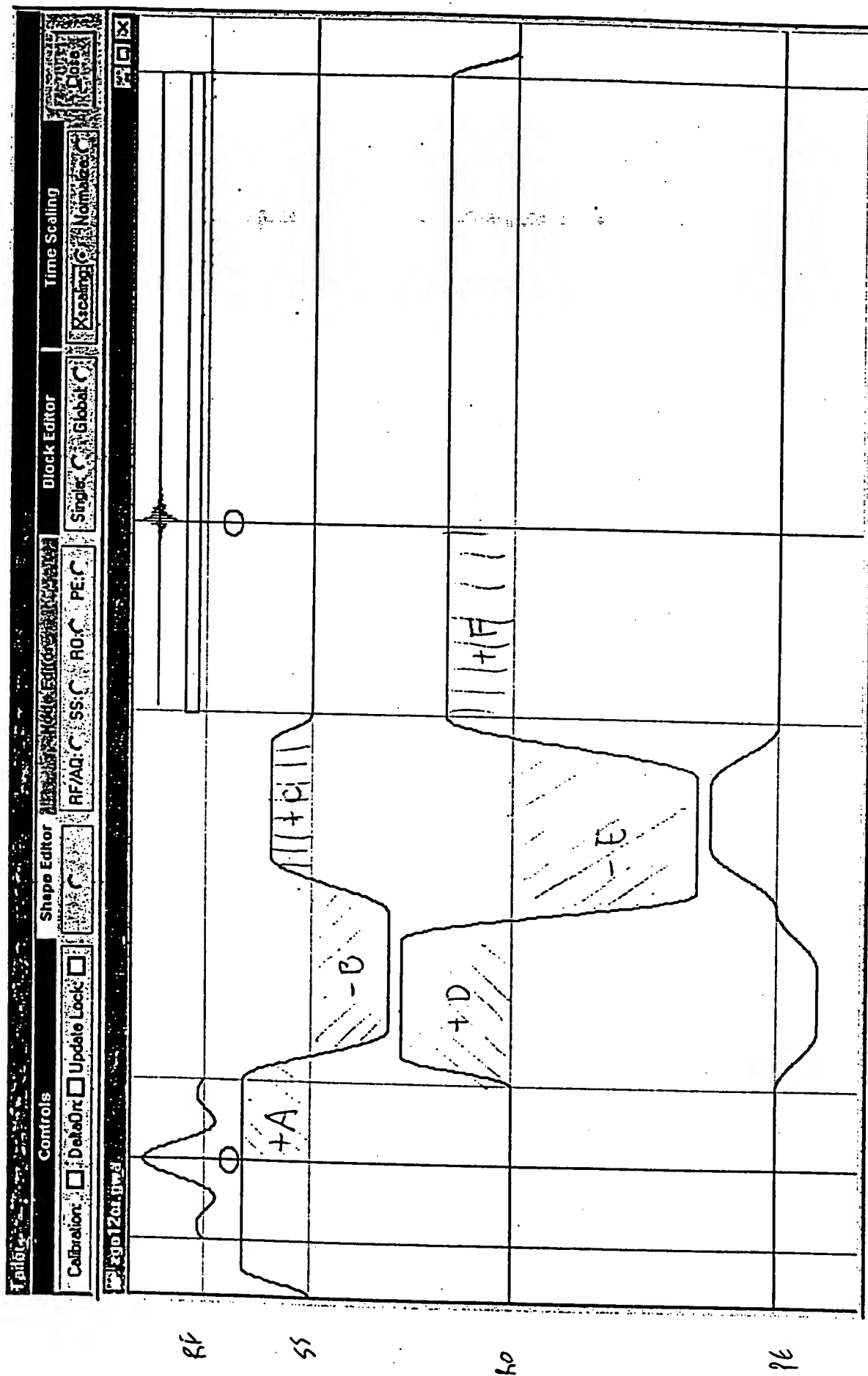


Fig. 14B

RF SS RO PE

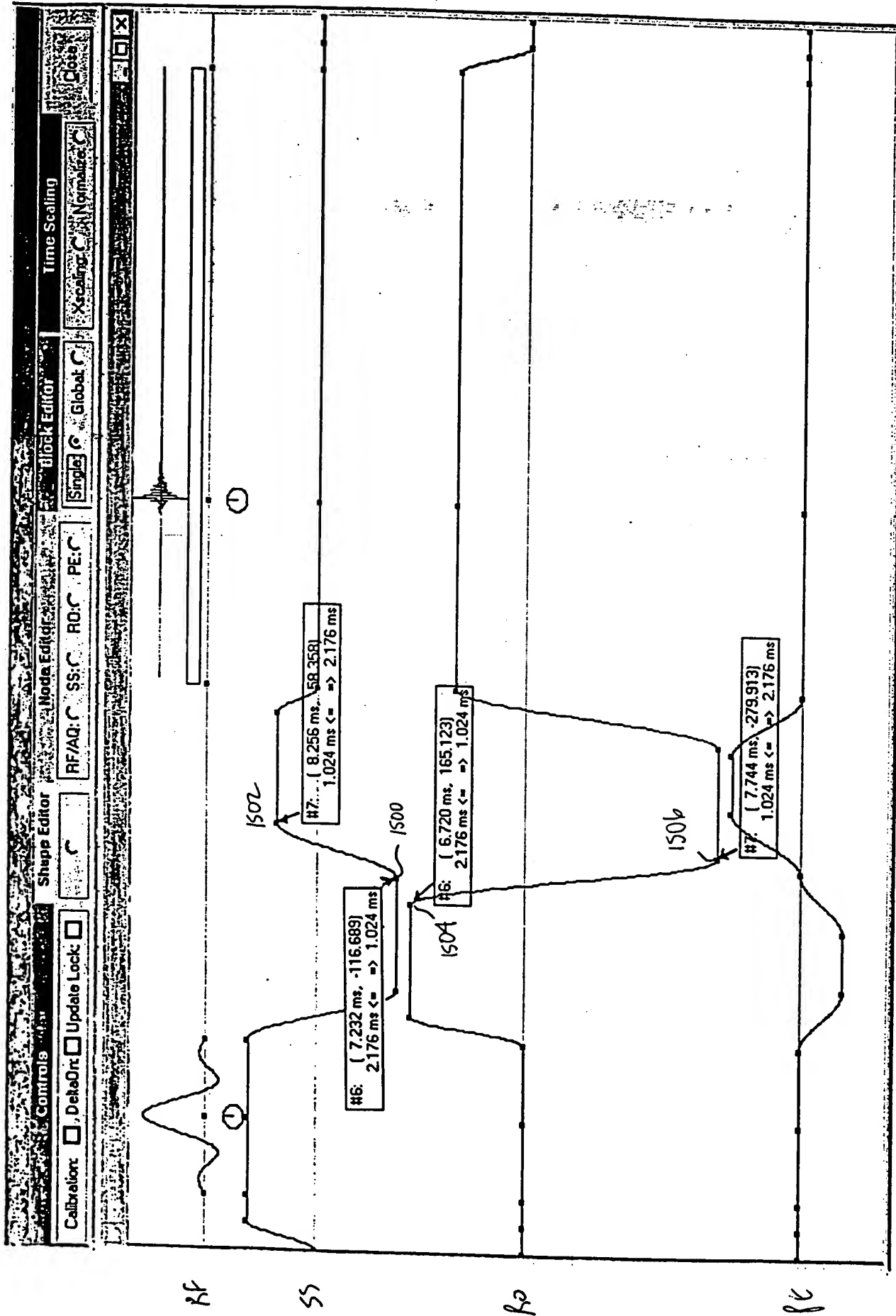


FIG. 15A :

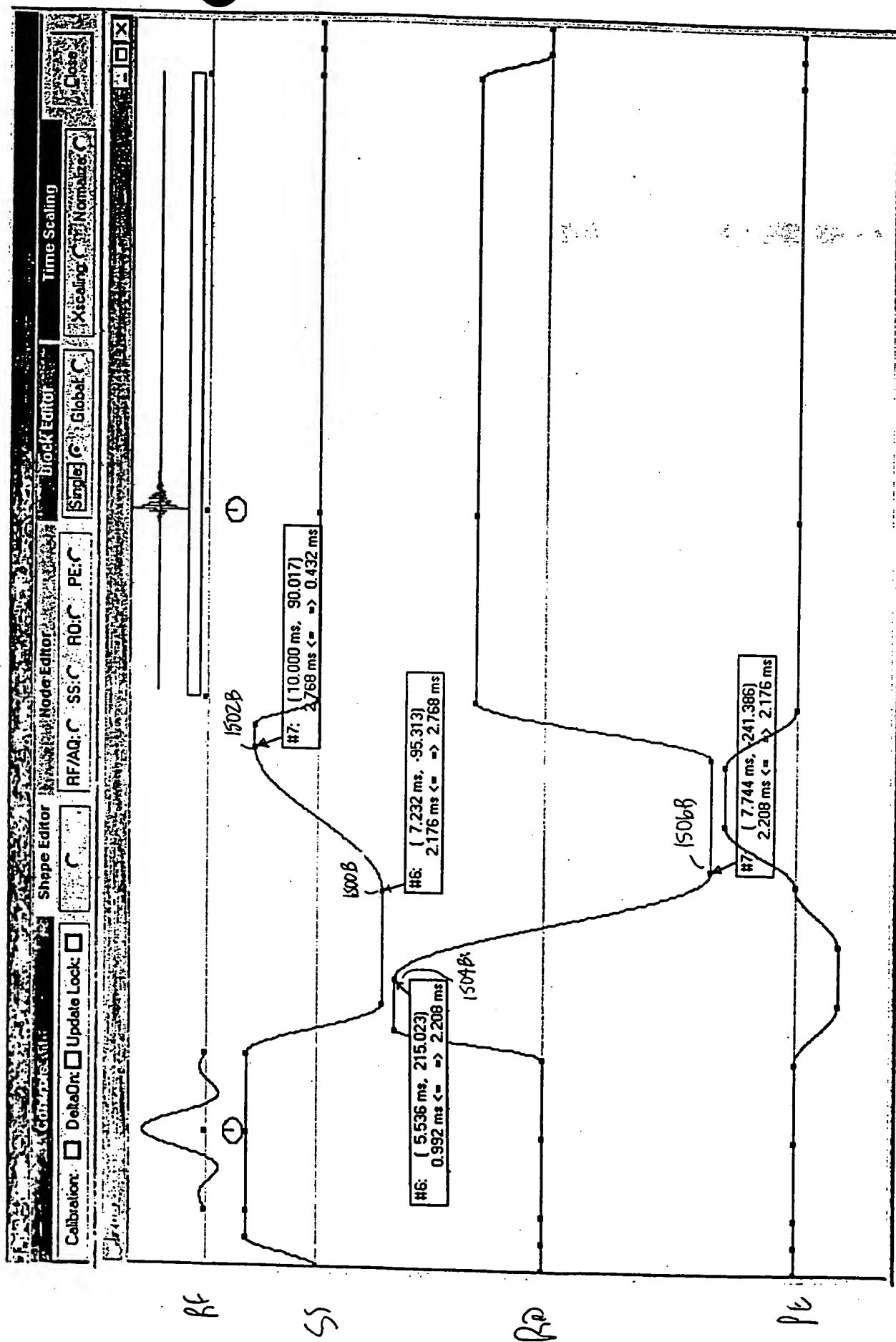
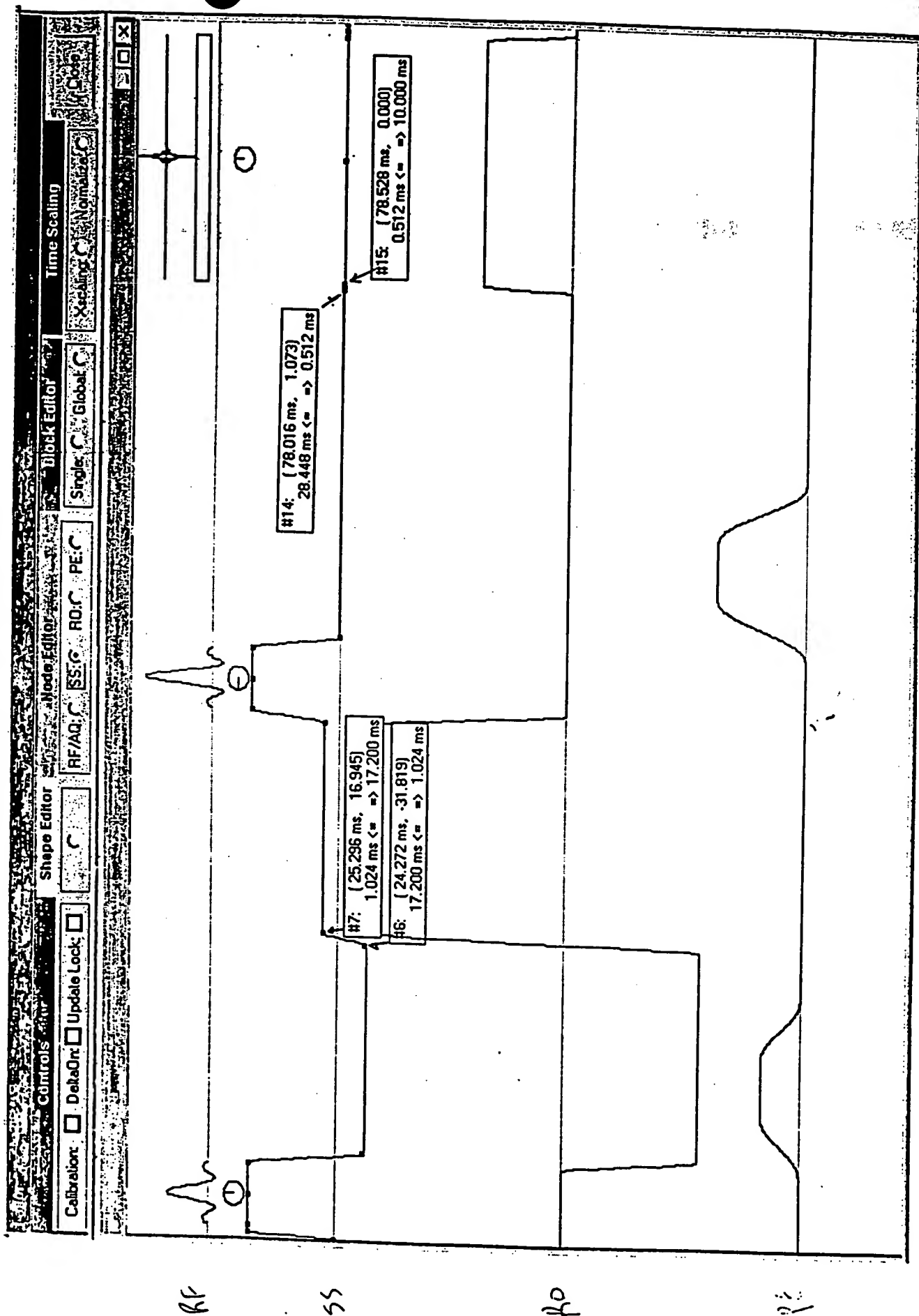


FIG. 15B.



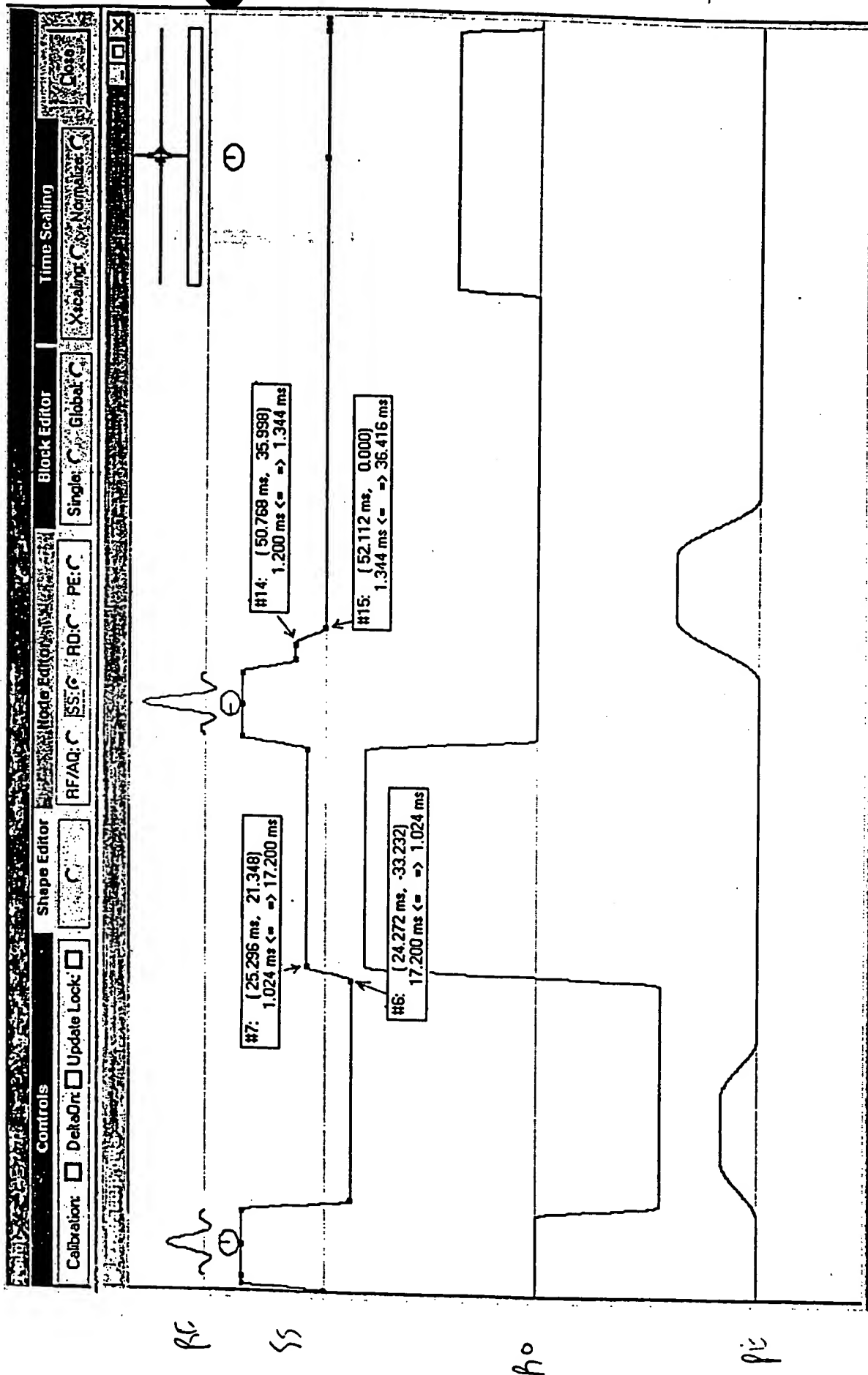


FIG. 16B

[illegible]

5

55

2

۷۷

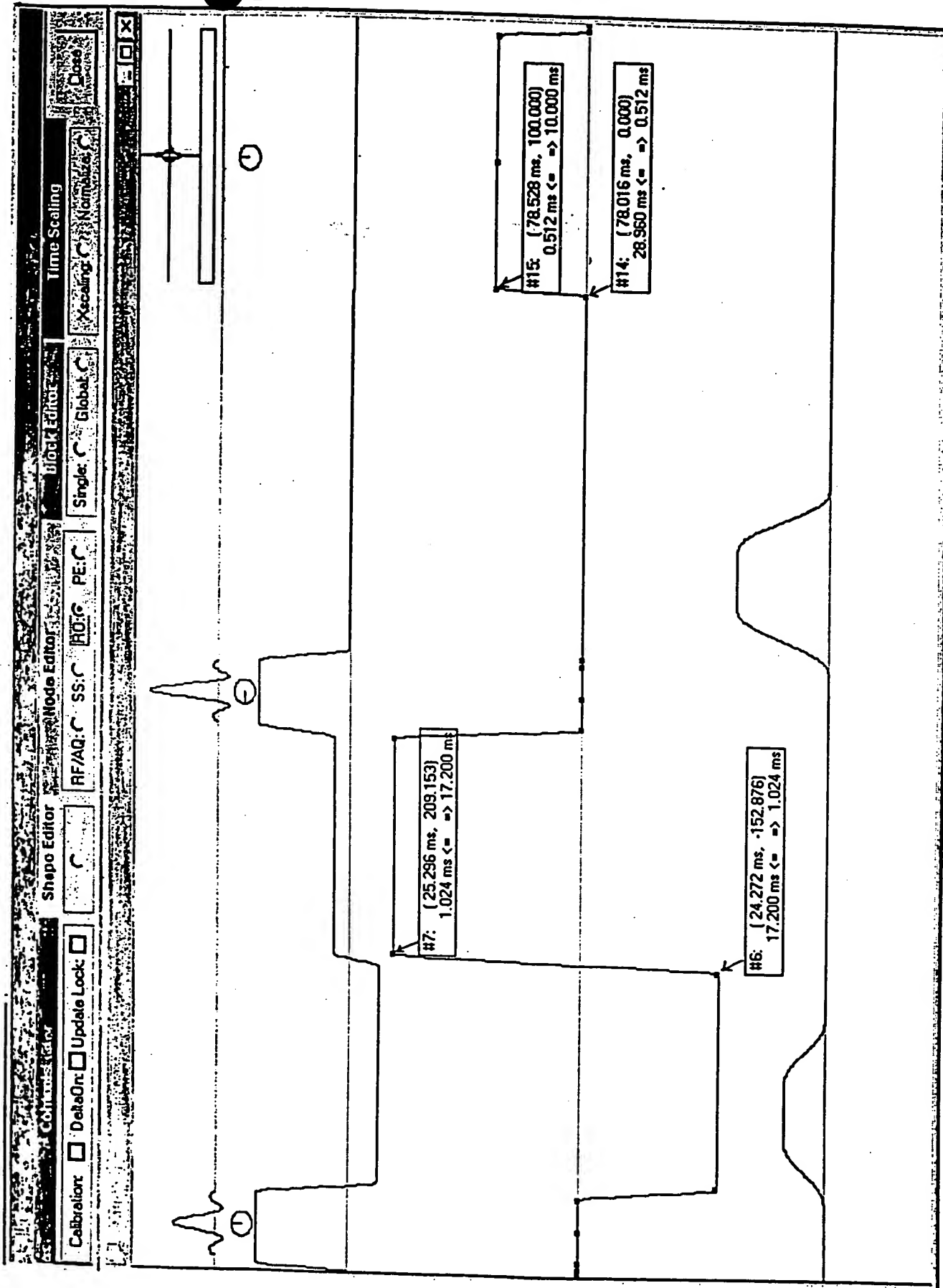


FIG. 16D

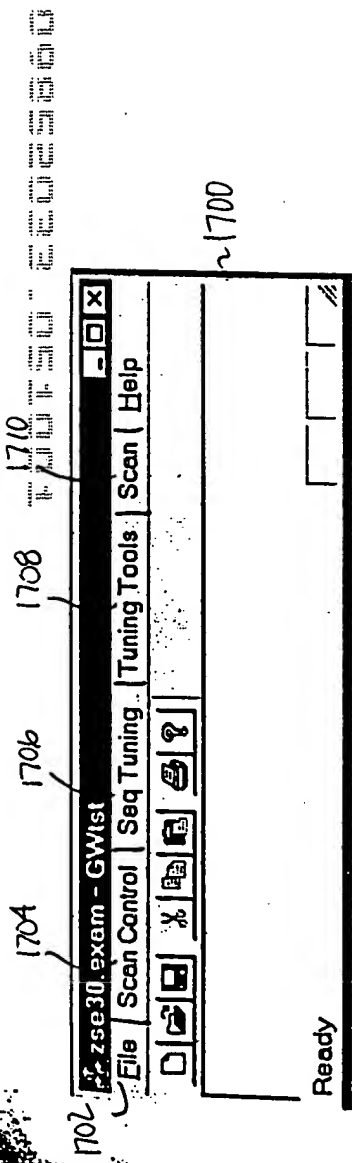


FIG. 17

# Sequence Tuning Display

1810

Control Menu

Upper Window:

☐ Input   ☐ Output  
☐ Real   ☐ Ampl  
☐ Imag   ☐ Phase

Lower Window:

☐ Input   ☐ Output  
☐ Real   ☐ Ampl  
☐ Imag   ☐ Phase  
☐ Waveform

Control Mode:

SS ☐ Joint Plot  
 RO ☐ Zoom  
 PE ☐ Auto Tun  
 TR ☐

Out PE ☐ Save

In PE ☐

Loop PE ☐ Send

Slice Plane: AXI-A/P

IN: ☐ OUT: ☐

Echo No.: ☐ ☐ Go

Skip Data: ☐ ☐ Go

Save Raws ☐

Pause

Con't

Close

upper

frame 1

Frame 1802

lower

frame 1

Frame 1806

upper

frame 2

Frame 1804

lower

frame 2

Frame 1808

1802

# Sequence Tuning Display

## Control Menu

### Upper Window:

- ☒ Input
- ☒ Output
- ☒ Real
- ☒ Ampl
- ☒ Imag
- ☒ Phase

### Lower Window:

- ☒ Input
- ☒ Output
- ☒ Real
- ☒ Ampl
- ☒ Imag
- ☒ Phase
- ☒ Waveform

## Control Mode:

- SS ☐ ☒ Joint Plot
- RO ☐ ☒ Zoom
- PE ☐ ☒ Auto Tun
- TR ☐ ☒ 0

Out PE ☐ Save

In PE ☐ Send

Loop PE ☐ Send

Slice Plane: AXI-A/P

IN: 0 OUT: 0

Echo No.: 0 Go

Skip Data: 5 Go

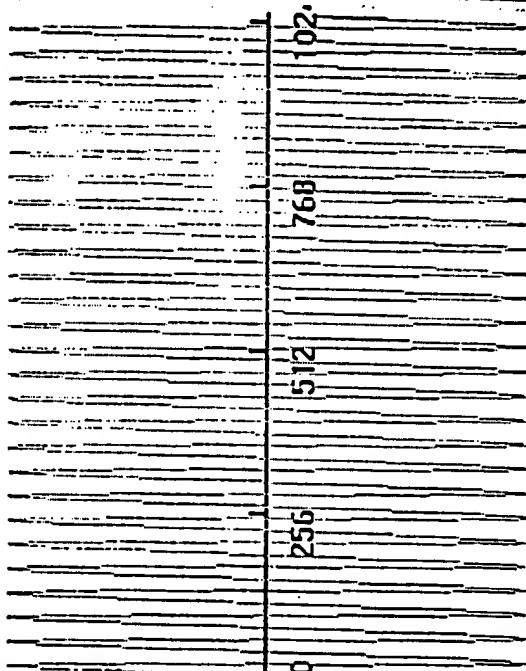
Save Raws 0

Pause

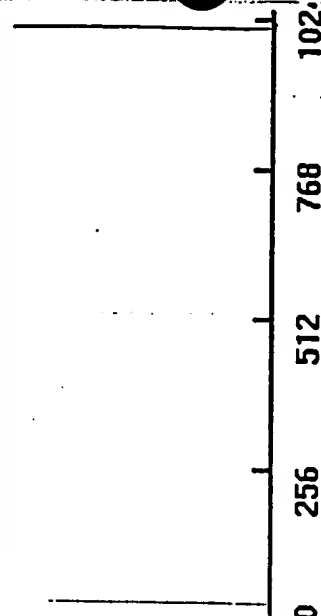
Con't

Close

Real ( 99.00, -99.00) - 8



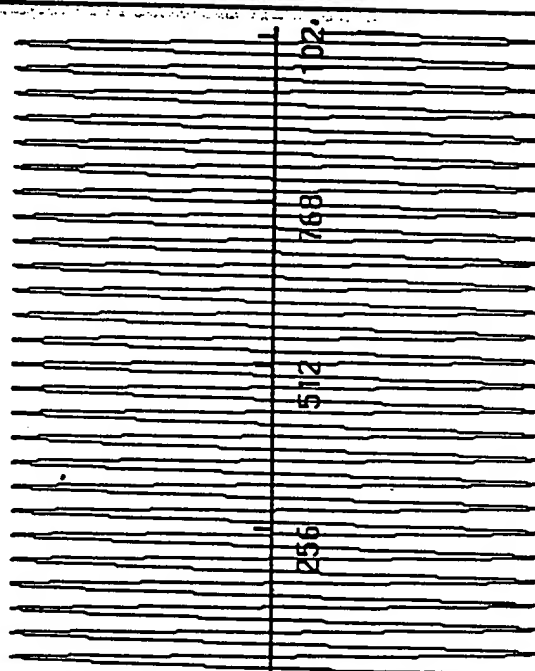
Ampl(77592.43, 10.75), Width(27 28 > 1)



1024 768 512 256 0

180

Imag ( 99.00, -99.00) - 7



Phase ( 179.81, -179.70)



256

1806

FIG. 18B

1004507 20030300

Scan Params ☒

Exam :: H:\Fonar\Exams\zse30.exam

TE: 30 ~ 1902

Slices: 1 ~ 1904

TR: 46 ~ 1906

NEX: 1 ~ 1908

Levels: 128 ~ 1910

ETL: 0 ~ 1912, 1914

Slice Plane: AXI-AP ☒

1916

Scan Time: 5888 MSec.

Imag::

1900

FIG. 19